



Bob Eisenberg <bob.eisenberg@gmail.com>

Re:

Bob Eisenberg <bob.eisenberg@gmail.com>

Sat, Nov 8, 2014 at 4:39 AM

Reply-To: bob.eisenberg@gmail.com

To: Gail Corbett <Corbett@siam.org>, "Bob Eisenberg beisenbe@rush" <beisenbe@rush.edu>

Dear Gail

I have the **Spikes, exploring....** book and agree it should be referenced.

For your information and Eric's (but please do not share with others whom I might inadvertently offend)

the relevant comment about the book (and present state of knowledge) is on p.17 in a section labelled in big bold type **Central Claims of the Book**.

The first two sentences say that "...even today a large fraction of what we know about the language of the brain" is in the classical paper of Adrian (1928).

The authors then go on of course to say there has been substantial progress.

But the key is there has been almost no progress in determining the **language** of the brain.

The first thing one needs to know about a computer is what is its language, i.e., what combination of electrical signals make a word and how is a word handled, etc etc. How are electrical on and off signals (called bits or the smallest unit of information in the computer) combined into a single LANGUAGE unit (the word) and then how is that word moved around, etc.

In computers different parts of the word are usually (almost always) on different wires (there are exceptions to be sure but those are just that).

In the brain,

a) we do not know if words exist at all (indeed the Rieke book convincingly argues that different functions have different coding some that is so succinct that it does not deserve the name word)

b) we do not know if they are on different wires (neurons) or the same

c) we do not know if words are sometimes in one form (one set of wires) and sometimes another (another set of wires) or sometimes a sequence on one wire.

In my view, significant process on INFORMATION processing in the brain cannot be made without answering these questions. Please note that a huge amount of OTHER medically and biologically and humanly possible information is known and is rapidly being added to about the brain. Almost none of this was known to Adrian in 1928.

But how the brain works, i.e., how it processes information is nearly the mystery today that it was in 1928, I fear.

As ever
Bob

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On Wed, Nov 5, 2014 at 4:16 PM, Gail Corbett <Corbett@siam.org> wrote:

Bob, thanks for your letter. I ran it by Eric, who suggested that we refer readers interested in your idea to a resource. It's mentioned at the end of the attached version of the letter. What do you think?

SIAM will be in Chicago in a week or so (Palmer House again) for a financial math conference. I was pretty enchanted with the Art Institute for having a Magritte exhibit during our summer meeting, but I won't be at financial math.

Hope you're well, busy, and happy.

Thanks again,

Gail

From: Bob Eisenberg [mailto:bob.eisenberg@gmail.com]
Sent: Monday, October 13, 2014 1:28 PM
To: Gail Corbett
Subject:

Dear Gail

I hope all is well with you and yours.

I wonder if I could submit the attached
as a potential "Letter to the Editor" for
SIAM News?

As ever

Bob

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